

## WILDLIFE MANAGEMENT UNIT 17 - WASATCH MOUNTAINS

### Boundary Description

**Salt Lake, Summit, Wasatch, Duchesne, Carbon, Utah counties** - Boundary begins at the junction of Interstate 15 and Interstate 80 in Salt Lake City, then east on I-80 to Highway US-40; south on US-40 to Highway SR-32; east on SR-32 to Highway SR-35; southeast on SR-35 to Highway SR-87; south on SR-87 to Duchesne and Highway US-191; south on US-191 to Highway US-6; northeast on US-6 to I-15; north on I-15 to I-80 in Salt Lake City.

### Management Unit Description

Management unit 17 is divided into eight smaller, more manageable subunits. These are: Diamond Fork, Hobble Creek, Timpanogas, Salt Lake County-East Bench, Heber, Currant Creek, Avintaquin, and Price Canyon. The Northeastern Region 2005 report covers only the Current Creek, and Avintaquin subunits. The Salt Lake County-East Bench subunit no longer contains range trend studies due to lack of access and development. The Diamond Fork, Hobble Creek, Timpanogas, and Heber subunits are monitored as part of the Division's Central Region rotation which were last read in 2002 and will be reread in 2007.

Of the total area within this management unit, 63% is summer range, 35% is winter range, and 2% is classified as year long range. The areas of most concern in this unit are the winter ranges, which are very limited in quantity and quality. Residential developments along the Wasatch Front have consumed much of the critical winter range that was available to wildlife, and this will continue in the future. Because most of the winter range in this unit now lies on private land, managing wildlife populations is a challenge. Critical issues facing management of big game in unit 17 include crop depredation, habitat quantity and quality, and highway mortality (Utah Division of Wildlife Resources 2003).

### Habitat Management Objectives/Strategies

The primary habitat management objectives for this unit are: 1) maintain and/or enhance forage production through direct range improvements throughout the unit on winter range; 2) work with private landowners and federal, state, local, and tribal governments to maintain and protect critical and existing winter range from future losses; and 3) provide improved habitat security and escapement opportunities for deer. The strategies to be used to accomplish these objectives are: 1) monitor range trend studies throughout the unit, specifically those found on remaining winter ranges; 2) work cooperatively to utilize grazing, prescribed burning, and other recognized vegetative manipulation techniques to enhance deer forage quantity and quality; 3) utilize antlerless deer harvest to improve or protect forage when vegetative declines are attributed to deer overutilization; and 4) cooperate with and provide input to land management planning efforts dealing with management affecting habitat security, quality, and quantity (Utah Division of Wildlife Resources 2003).

### Trend Study Description

Eleven trend studies were established in 1982 and reread in 1988, and 1995. Several studies have been added including: Emma Park (17-59) in 1994, Rabbit Gulch (17-67) in 1997, Emma Park Harrow grazed/ungrazed (17R-7 and 17R-8) in 2001, Emma Park Meadow (17R-9) in 2001, and Sand Wash (17-66) and Little Horse Ridge (17-65) in 2005. In 2000, the road to the Blacktail Ridge (17-48) was impassible to trucks so was not read. The road to Sam's Canyon, on Ute Indian land was impassible in 2000, but read in 2005. Peatross Ranch (17-54) was not read in 2005 because of low production and little wildlife use. The total number of sites read in 2005 was 16. Ten are located on lands managed by the Utah Division of Wildlife, 4 are managed by the Bureau of Land Management, 1 is on private land, and 1 on Ute Tribal land.

## SUMMARY

### DEER HERD UNIT - 17 - WASATCH MOUNTAINS

The portion of Wildlife Management Unit 17 read in 2005 contains the subunits Currant Creek and Avintaquin. This section contains 18 trend studies of which 16 were read in 2005. Six studies are dominated by Wyoming big sagebrush, 5 have mountain big sagebrush, 3 are mountain brush, and 2 are pinyon-juniper chainings. Two trends studies were established in 2005 at Sand Wash (17-66) and Little Horse Ridge (17-65), both located on DWR Wildlife Management Areas. The two studies that were not read in 2005 were Blacktail Ridge (17-48), due to road closure in 2000, and Peatross Ranch (17-54) which has very little wildlife use.

In 2000, the browse component on the majority of the studies in this unit showed negative characteristics due to drought. This trend continued in 2005 to a greater extent with large decreases in sagebrush density observed. The herbaceous vegetation cover was very low in 2000, but typically increased with above normal precipitation in 2005. Of the trend studies read in 2005 (excluding new studies):

The key browse species, Wyoming big sagebrush and mountain big sagebrush, are of primary importance during the critical months of winter. These principal species have shown continuing increases in decadence and loss of plants. Their respective perennial understories have also shown similar downward changes. Mountain big sagebrush, because of its better site potential, has declining population characteristics that are not as severely depressed as those for Wyoming big sagebrush which always appears to occur on sites of poorer site potential. The following series of values are averages listed in order of year sampled (1995, 2000, and 2005). These values help illustrate best the differences between the two species of sagebrush. These averages are as follows:

- percent decadence..... 24%, 34%, and 40% for mountain big sagebrush
- percent decadence..... 10%, 21%, and 45% for Wyoming big sagebrush
- percent dying..... 9%, 10%, and 18% for mountain big sagebrush
- percent dying..... 5%, 10%, and 31% for Wyoming big sagebrush
- population changes..... 2,893 (1995) and 2,489 plants/acre for mountain big sagebrush (-14% change)
- population changes..... 3,780 (1995) and 1,990 plants/acre for Wyoming big sagebrush (-47% change)

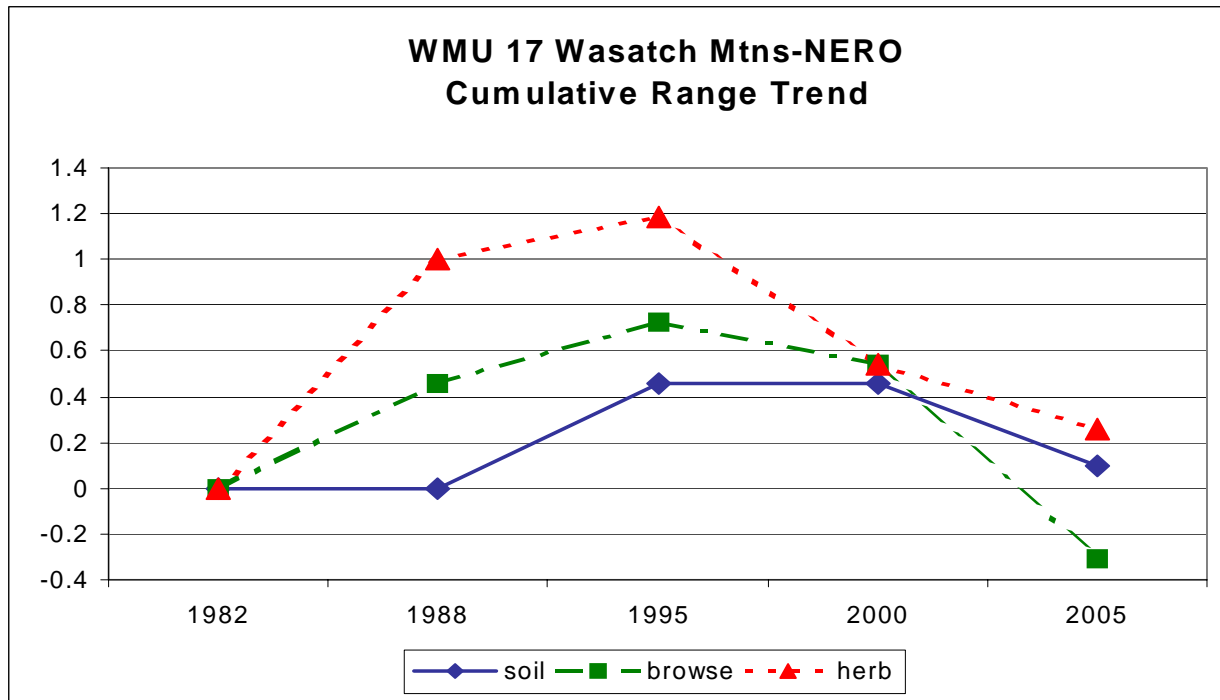
The perennial herbaceous understories associated with mountain big sagebrush and Wyoming big sagebrush have similar downward trends with regard to the site potentials of the two sagebrush subspecies communities. The following values show percent change in nested frequency for perennial grasses and forbs for both subspecies of sagebrush from 1995 and 2005:

- percent change for perennial grasses... -3% for mountain big sagebrush
- percent change for perennial grasses... -7% for Wyoming big sagebrush
- percent change for perennial forbs..... -11% for mountain big sagebrush
- percent change for perennial forbs..... -40% for Wyoming big sagebrush

Increases in decadency and poor vigor for key browse populations, specifically sagebrush, resulted in a downward browse trend for all populations of Wyoming big sagebrush and black sagebrush in 2005. For mountain big sagebrush, 4 populations were stable to improving, while 3 showed downward trends for 2005.

# Cumulative Range Trends -- WMU 17 Wasatch Mountains-NERO

	1982	1988	1995	2000	2005
soil	0	0.0	0.5	0.5	0.1
browse	0	0.5	0.7	0.5	-0.3
herb	0	1.0	1.2	0.5	0.3
	11 sites	11 sites	11 sites	11 sites	14 sites



## TREND SUMMARY

	Category	1982	1988	1995	2000	2005
Blacktail Ridge 17-48	soil	est	+2	0	NR	NR
	browse	est	-2	+1	NR	NR
	herbaceous understory	est	+2	-1	NR	NR
Grey Wolf Mountain 17-49	soil	est	0	0	0	0
	browse	est	+2	0	0	-2
	herbaceous understory	est	+1	+1	-1	-1
Lower Santaquin Draw 17-50	soil	est	0	+1	0	-1
	browse	est	0	+1	0	-2
	herbaceous understory	est	+2	0	-1	0
Santaquin's Cabin 17-51	soil	est	-1	+1	0	-1
	browse	est	-1	0	-2	-1
	herbaceous understory	est	0	+1	-2	-1
Cutoff 17-52	soil	est	0	+1	0	0
	browse	est	-1	0	0	-1
	herbaceous understory	est	+1	+1	-1	+1
Two Bar Ranch 17-53	soil	est	-1	+1	0	0
	browse	est	+2	0	0	-2
	herbaceous understory	est	0	+2	0	-2
Peatross Ranch 17-54	soil	est	-1	+1	0	NR
	browse	est	+1	0	0	NR
	herbaceous understory	est	+1	-2	0	NR
Lower Horse Ridge 17-55	soil	est	+1	0	0	0
	browse	est	+2	0	0	0
	herbaceous understory	est	+2	-1	-2	0
Sam's Canyon 17-56	soil	est	0	0	NR	0
	browse	est	0	0	NR	-1
	herbaceous understory	est	0	+1	NR	-2

(-2) = down, (-1) = slightly down, (0) = stable, (+1) = slightly up, (+2) = up  
 est = site established, NA = data not available, NR = site not read

	Category	1982	1988	1995	2000	2005
Skitzy Canyon 17-57	soil	est	0	0	0	-1
	browse	est	+1	+1	+1	-2
	herbaceous understory	est	+1	0	0	-2
Buck Knoll 17-58	soil	est	0	0	0	-1
	browse	est	+1	0	0	+2
	herbaceous understory	est	+1	0	-2	0
Emma Park 17-59	soil			est	0	-1
	browse			est	0	-1
	herbaceous understory			est	+2	0
17-65 Little Horse Ridge	soil					est
	browse					est
	herbaceous understory					est
17-66 Sand Wash	soil					est
	browse					est
	herbaceous understory					est
	Category			1997	2001	2005
17-67 Rabbit Gulch	soil			est	0	0
	browse			est	-1	-2
	herbaceous understory			est	0	0
17R-7 Emma Park Harrow Grazed	soil					est 0
	browse					est +1
	herbaceous understory					est +1
17R-8 Emma Park Harrow Ungrazed	soil					est 0
	browse					est +1
	herbaceous understory					est +2
17R-9 Emma Park Meadow	soil					est 0
	browse					est -2
	herbaceous understory					est 0

(-2) = down, (-1) = slightly down, (0) = stable, (+1) = slightly up, (+2) = up  
 est = site established, NA = data not available, NR = site not read

	Category	1982	1988	1995/ 1997	2000/ 2001	2005
<b>Average Range Trend</b>	<b>soil</b>	est	0.0	0.5	0.0	-0.4
	<b>browse</b>	est	0.5	0.3	-0.2	-0.9
	<b>herbaceous understory</b>	est	1.0	0.2	-0.6	-0.3
Number of Sites Read		11	11	13	14	16

(-2) = down, (-1) = slightly down, (0) = stable, (+1) = slightly up, (+2) = up  
 est = site established, NA = data not available, NR = site not read

Precipitation graphs for the Wasatch Mountains NERO unit. Data is percent of normal precipitation averaged for weather stations in Duchesne, Altamont, and Helper (Utah Climate Summaries 2005).

